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Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C.

In the Matter of **RULEMAKING TO AMEND PARTS 1, 2, 21, AND 25 OF THE COMMISSION'S RULES TO REDESIGNATE THE 27.5-29.5 GHz FREQUENCY BAND, TO REALLOCATE THE 29.5-30.0 GHz FREQUENCY BAND, TO ESTABLISH RULES AND POLICIES FOR LOCAL MULTIPOINT DISTRIBUTION SERVICE AND FOR FIXED SATELLITE SERVICES**	CC Docket No. 92-297

REPLY OF TELEDESIC LLC

Teledesic LLC hereby submits its Reply to the Oppositions and Comments filed regarding its Petition for Reconsideration and/or Clarification in this proceeding.[1] In its original petition, Teledesic asked the Commission (1) to clarify that it did not adopt any particular sharing rules and has not yet determined the extent to which NGSO FSS systems can share using non-coordinated orbits; (2) to clarify that the "burden-sharing" language in the *Third Report and Order* is not to be understood as a departure from the Commission's longstanding policy of requiring new applicants to protect existing licensees from harmful interference; and (3) to eliminate from the *Third Report and Order* the discussion of segmenting the 500 MHz reserved for primary use by NGSO FSS systems. While each of the parties filing responsive pleadings has its own perspective on these issues, the pleadings evidence more agreement than first meets the eye.

[1] Filed Dec. 18, 1998; the license previously held by Teledesic Corporation has been assigned to Teledesic LLC. Letter Order dated Jan 26, 1998 (File No. 0800B3).

NGSO FSS SHARING IS POSSIBLE, MAKING BAND-SPLITTING UNNECESSARY.

In its Partial Opposition, Motorola agrees with Teledesic that any discussion of splitting the band between or among NGSO FSS systems is unnecessary because technical studies demonstrate the feasibility of co-frequency operation.[2] Lockheed Martin states that it too believes sharing is possible, but states without elaboration that it "may be premature" to rule out band-splitting, "in view of the ongoing work in this area."[3] Whatever "ongoing work" Lockheed has in mind, every party commenting on this issue believes that NGSO FSS sharing is already possible. Accordingly, the Commission should not leave the door open for later applicants to take a step *backwards* by adopting technologies that would require band-splitting. Clarification of this point as requested by Teledesic would prevent later applicants from insisting that the NGSO FSS spectrum should be divided in order to accommodate their particular choice of technology.

THE COMMISSION SHOULD CLARIFY THAT IT HAS NOT ADOPTED SPECIFIC SHARING RULES OR ENDORSED ANY PARTICULAR METHOD OF SHARING BETWEEN OR AMONG NGSO FSS SYSTEMS.

In its Petition, Teledesic highlighted language from the *Third Report and Order* that could be construed to imply that the Commission had already determined that multiple NGSO FSS systems could share using non-coordinated orbits. Teledesic asked the Commission to confirm that no such endorsement was intended. Lockheed Martin and Skybridge II agreed with Teledesic that no endorsement was intended.

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[2] Comments and Partial Opposition of Motorola, Inc. to Petitions for Reconsideration, at 3 n.8 (filed Feb. 5, 1998). Moreover, NGSO FSS systems cannot be economically viable operating with less than 500 MHz. *See* Teledesic Petition at 11-15.

[3] Consolidated Comments of Lockheed Martin Corp., at 8 (filed Feb. 5, 1998).

Teledesic's point here is a simple one: the Commission should only approve sharing proposals that work. Teledesic has repeatedly suggested sharing through the use of coordinated orbits because sharing is possible with this approach. Indeed, sharing using coordinated orbits is the *only* technique that has been judged feasible by objective international studies.[4] If some other approach — including use of non-coordinated orbits — successfully facilitates co-frequency operation without harmful interference, future applicants should be free to implement it, but only if each applicant demonstrates that its sharing technique(s) will work. If, on the other hand, evidence in a future proceeding suggests that use of non-coordinated orbits does *not* allow co-frequency operation without harmful interference, no party should be allowed to claim that the *Third Report and Order* already endorsed non-coordinated orbits. Failure to clarify this point could threaten the development of competition (or indeed, any workable service) in the band.

THE COMMISSION SHOULD CLARIFY THAT IT DOES NOT INTEND TO REQUIRE LICENSEES TO SIGNIFICANTLY ALTER THEIR SYSTEMS TO ACCOMMODATE LATER APPLICANTS.

Traditionally, a license from the FCC has carried with it an expectation of protection from harmful interference. While satellite licensees have been required to coordinate with new applicants, they have not been required to *significantly alter* their systems. Because some of the "burden-sharing" language in the *Third Report and Order* could be interpreted as a departure from this traditional approach,[5] Teledesic seeks clarification that the Commission does not intend to treat licensees and applicants as equals in apportioning the sharing burden. In the alternative, Teledesic seeks

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[4] CPM-97 Report § 4.4.1.1.1 (adopted May 16, 1997 at the ITU's Conference Preparatory Meeting).

[5] *Third Report and Order*, ¶ 38.

reconsideration to conform the *Third Report and Order* to both domestic and international law, as well as sound policy.

Several of the parties filing oppositions and comments in this proceeding endorse the Commission's general policy of according licensees priority over later applicants. Lockheed Martin endorses the "significantly alter" language specifically, agreeing that "satellite licensees should not be required to significantly alter their fundamental system designs to accommodate future entrants."[6] TRW uses slightly different language, but conveys the same idea in arguing that coordination should not require "significant re-engineering of a system" or a "major alteration of system architecture."[7] Finally, GE Americom registers its agreement with the policy underlying the traditional approach, noting that "[t]he certainty associated with Commission licenses is important and should be protected."[8]

The broad agreement on this point is not surprising. The stability of Commission licenses promotes speedy deployment of satellite systems, whereas instability leads to delay. Lockheed Martin and GE both recognize this point, at least when it comes to their own GSO licenses. Both companies support Hughes's petition for full disclosure of the foreign coordination agreements the Commission has concluded on behalf of Motorola. GE urges the Commission to grant the Hughes petition, "to permit GSO licensees to understand the precise scope of their obligations to accommodate foreign agreements that are inconsistent with the band plan."[9] Lockheed Martin "agrees that this information is

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[6] Consolidated Comments of Lockheed Martin, at 8 .

[7] Opposition of TRW Inc. to Teledesic Corporation's Petition for Clarification and/or Reconsideration, at 5 (filed Feb. 5, 1998).

[8] Comments of GE American Communications, Inc. on Petitions for Reconsideration or Clarification, at 4 (filed Feb. 5, 1998).

[9] GE Americom Comments, at 3.

important for GSO FSS licensees to finalize their system designs."[10] Loral "agrees with Hughes that unless the Commission provides this information, licensees cannot be expected to finalize their system designs and commence construction because they cannot understand the extent of the modifications that the Commission may require."[11] What GE and Lockheed do not seem to realize is that this general point is as valid for NGSO licensees as it is for GSO licensees. Both classes of licensees need to know what they are entitled, indeed required, to build. There can be no principled reason for supporting the Hughes petition and opposing the Teledesic petition, as both Lockheed Martin and GE do.

Clarification or reconsideration of the "burden-sharing" language is also necessary because of its potential negative impact on investment in satellite systems. As Teledesic argued in its Petition, the stability of Commission licenses has been a necessary precondition for the successful development of the U.S. satellite industry.[12] Stability will continue to be necessary in the future, particularly for global NGSO FSS systems. The complexity of NGSO FSS systems requires that licensees and investors expend substantial time, money, and energy many years before launch, in reliance on the implicit assurance that their systems will not be fundamentally altered by the Commission for the private benefit of later applicants. For these reasons, the Commission's assurance that it will consider "whether a particular NGSO FSS satellite is already in-orbit and operational" is inadequate.[13] A rule that saddles investors with unbounded regulatory risk right up to the moment of launch would deter necessary investment, raising the strong

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[10] Consolidated Comments of Lockheed Martin Corp., at 2.
[11] Comments of Loral Space & Communications Ltd., at 3.
[12] Teledesic Petition, at 17.

possibility that the moment of launch would never arrive. In the interest of promoting the actual development and deployment of these systems, the Commission should revise the *Third Report and Order* to establish that "[i]n apportioning burden, it is appropriate to consider factors such as whether a particular NGSO FSS system has already been licensed."[14] Getting a license is enough of an obstacle to obtaining sufficient investment to build these systems. The Commission should not place further regulatory roadblocks in the way.

Instead, the Commission should continue to follow its traditional approach, which dates from the early days of broadcast regulation,[15] and has been reaffirmed as recently as the *DISCO II Report and Order.* In *DISCO II,* the Commission reiterated the fundamental premise that the coordination obligations of satellite licensees are not so great as to require that a licensee "significantly alter" its system to make room for a later applicant.[16]

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[13] *Third Report & Order,* ¶ 38.

[14] This rule would accord with the Commission's approach to orbital re-assignments for geostationary satellites. While the Commission has relocated some licensed satellites in implementing new assignment plans, it seeks to "minimize the number of relocations of in-orbit satellites, as well as the number of reassignments to satellites assigned an orbital location but *not yet launched.*" Assignment of Orbital Locations to Space Stations in the Domestic Fixed-Satellite Service, FCC 85-396, at ¶ 7 (1985) (emphasis added).

[15] *Midnight Sun Broadcasting Co.*, 11 F.C.C. 1119 (1947); *Sudbrink Broadcasting of Georgia, Inc.*, 65 F.C.C. 2d 691, 692 (1977). TRW attempts to distinguish the cases cited by Teledesic on the ground that they are "decades-old" and of no relevance in the context of satellite coordination. TRW, at 4. The fact that a line of cases has been consistently applied over a long period of time often demonstrates its resilience and worth, not its irrelevance. *See Doe v. United States*, 976 F.2d 1071, 1083 (7th Cir. 1993), *citing Marbury v. Madison*, 5 U.S. 1 (1 Cranch) 137 (1803). But in any case, the Commission has recently reiterated the rule enunciated in the cases cited in Teledesic's initial Petition. *See* Application of WKLX, Inc., 6 F.C.C. Rcd. 225, 226, ¶ 14 (1991). TRW is also incorrect in arguing that the *Midnight Sun* and *Sudbrink* cases have no relevance outside the broadcast context. The Commission has cited these two cases and their progeny for the proposition that the newcomers must protect licensees in many non-broadcast services in which multiple operators share frequencies. *See, e.g.,* Amendment of Sections 22.501(g)(2) and 94.65(a)(1) of the Rules and Regulations to Re-Channel the 900 MHz Multiple Address Frequencies, 3 F.C.C. Rcd. 1564, 1570 and n.95 (1988).

[16] Amendment to the Commission's Regulatory Policies to Allow Non-U.S.-Licensed Space Stations to Provide Domestic and International Satellite Service in the United States, FCC 97-399 (rel.

Based on the *DISCO II* formulation of this principle, as well as the recent WTO Agreement, Teledesic pointed out in its Petition that the "burden-sharing" language of the *Third Report and Order* is contrary to the treaty obligations of the United States. The comments and oppositions reveal some misunderstanding regarding this argument, indicating the need for further elaboration. The Commission has clearly stated that when a foreign-licensed satellite operator seeks entry into the U.S. market *after* U.S. licenses have been granted, the Commission will not "require U.S. licensed systems to *significantly alter* their operation" in order to free up spectrum for the prospective new entrant.[17] If the Commission will not force a U.S. licensee to significantly alter its operations for a foreign-licensed applicant, then it would be discriminatory to require the same U.S. licensee to make significant alterations for a U.S. applicant. To accord the U.S. applicant more favorable treatment than the foreign one would violate the equal treatment obligations imposed by the GATS and the WTO Agreement.[18]

In this case, for example, only Teledesic applied for an NGSO FSS license in the Commission's first Ka-band processing round, and only Teledesic has a license to operate an NGSO FSS system in the Ka band. Since the Commission will not, under *DISCO II,* require Teledesic to significantly alter its operations to make spectrum available to a foreign-licensed operator, it would violate U.S. treaty obligations — *i.e.,* it would be

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Nov. 26, 1997) ("*DISCO II Report and Order*"). No party has requested reconsideration of this part of the *DISCO II Report and Order.*

[17] *See DISCO II Report and Order*, at ¶¶ 16 and 149 (foreign licensees can apply as part of a processing round or separately when the non-U.S. satellite is already in orbit).

[18] Uruguay Round of Multilateral Trade Negotiations: General Agreement on Trade in Services, Article XVII; Agreement on Basic Telecommunications Services, Article 6.

illegal— if the Commission forced Teledesic to significantly alter its operations to make spectrum available to a domestic second-round applicants.[19]

Although they agree with the general principle that licensees should not be forced to significantly alter their systems to accommodate applicants, several of the filers in this proceeding attempt to craft a special exception from this rule for Teledesic. TRW and Lockheed Martin imply that Teledesic is a second-class licensee because the Commission waived financial requirements for Teledesic at the time of licensing.[20] It is true that the Commission waived financial requirements in Teledesic's license, properly determining that granting the license would not preclude future NGSO FSS entry. But this argument proves too much. The Commission also waived financial standards for every first-round GSO application, for precisely the same reasons.[21] The bizarre consequence of accepting TRW and Lockheed Martin's argument would be that a first-round GSO licensee and a second-round GSO applicant would have equal claim to the licensee's orbital assignment, at least until such time as the licensee's system were in orbit and operational. This result makes little sense, would wreak havoc on settled expectations, and is contrary to years of Commission precedent.[22]

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[19] In addition, Teledesic also pointed out that Article 6 § 3 of the ITU Radio Regulations requires that the FCC make new frequency assignments only in such a way that "avoid[s] causing harmful interference" to foreign licensees. The Commission is therefore required to give priority to foreign licenses over mere applicants in the U.S. While it is not *illegal* for the Commission to treat its own licensees less favorably, it is certainly a perverse result as a matter of U.S. public policy.

[20] Lockheed Martin, at 9; TRW, at 7.

[21] *Third Report and Order, ¶ 18.*

[22] *See Satellite Transponder Leasing Corp.*, 2 F.C.C. Rcd. 5416, 5416 at ¶¶ 6-7 (1987); Assignment of Orbital Locations to Space Stations in the Domestic Fixed Satellite Service, 3 F.C.C. Rcd. 6972, ¶¶ 3, 12 (1988); Assignment of Orbital Locations to Space Stations in the Domestic Fixed Satellite Service, FCC 85-396 at ¶ 7 (1985); *TRW*, 11 F.C.C. Rcd. 20419 ¶ 50 (Int'l Bur. 1996) (modification approved so long as it does not impair coordination with systems already under construction or in operation).

Lockheed Martin also suggests that a special Teledesic exception to licensee priority should be crafted because NGSO FSS systems are new and evolving, and in a constant state of flux.[23] Similarly, GE notes that the first Teledesic launch is still "three to four years away."[24] These arguments are precisely backwards. Licensees in new and evolving services have more to fear from regulatory instability and delay than do licensees in more traditional services. Given the technical challenges, the Commission should do what it can to signal investors that its licensees have definite and reliable authorizations to operate.[25] Similarly, the tremendous capital needs of global NGSO FSS systems and the fact that it takes many years to license and launch them is surely no reason to inject even more delay and uncertainty into the process four years after the original application was filed. To the contrary, the Commission should attempt to provide the highest possible degree of stability and certainty for NGSO FSS operators, by making clear that it will not require licensees to significantly alter their networks.

Given the complexity and evolving nature of NGSO FSS service, it is probably not useful to attempt to devise a bright-line rule for what will constitute a significant alteration. But the Commission should make clear that licensees cannot be required to significantly alter their *service quality*, *system cost*, or *deployment schedule* to avoid

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[23] Lockheed Martin, at 9-10.

[24] GE American, at 5, *quoting* Teledesic Petition at 18 n.29.

[25] Motorola argues that Teledesic should not be accorded licensee status because its design evolved during the three-year licensing process. Motorola, at 16-17. This argument fails because Teledesic's proposed changes constitute "minor modifications" which can be made to the original license under clear Commission precedent. Teledesic has addressed this issue at length in other submissions to the Commission. *See* Opposition to Motorola's Petition to Deny of Teledesic Corporation, File No. 195-SAT-ML-97, (filed November 17, 1997). Indeed, the modifications make it easier for later applicants to operate co-frequency with the Teledesic system without suffering or receiving harmful interference. In addition, the lengthy processing time for satellite system applications — three years in Teledesic's case — virtually ensures that modifications will be required before launch. If the Commission requires licensees to endure yet another processing round when such modifications are proposed, the result will be even more delay,

interference to or from later applicants. Above all, the service rules should provide assurances to operators and investors that the fundamentals of their authorization will not be altered. In so doing, the Commission will hasten the day when the first NGSO FSS system launches into orbit and becomes operational.

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perhaps requiring yet another round of modifications, and so on. Following this approach would delay, if not completely thwart, provision of NGSO FSS service to the public.

CERTIFICATE OF SERVICE

I, Evan R. Grayer, hereby certify that copies of the foregoing "Reply of Teledesic LLC" were served, via mail delivery, upon the following this 17th day of February, 1998:

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